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Subject: Re: How to access properties of multiple plots in a function graphics window?

Posted by [David Fanning](#) on Wed, 13 Nov 2013 17:31:37 GMT

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Mark Piper writes:

```
>
> On Tuesday, November 12, 2013 10:22:02 AM UTC-7, Paul van Delst wrote:
>>
>> What I want to do is access w and modify the properties of the various
>> plots (e.g. font size, legend font size) via the "w" object reference.
>>
>
> Hi Paul,
>
> You can access plot properties by NAME. For example, given:
>
> w = window()
> for i=0, 5 do begin
>
>   !null = plot(/test, color=!color.(i), layout=[3,2,i+1], $
>               current=w, name=string(i, format='(i2.2)'))
>   endfor
>
> you can set the color of the fifth plot to red with:
>
> w['04'].color = 'red'
```

This is pretty useful. Especially if you know the name of the plot (although unlikely in a widget program). I was curious just what was in a window object (I assumed it was a container), so I wrote a small program to give me back the contents of an object.

```
;-----
FUNCTION cgGetObjects, theObject, ISA=isa, COUNT=count
```

```
On_Error, 2
```

```
count = 0
IF Obj_HasMethod(theObject, 'GET') THEN BEGIN
  contents = theObject -> Get(/ALL,COUNT=childCount)
ENDIF ELSE RETURN, !NULL
```

```
; If there is nothing in the container, return !NULL.
IF childCount EQ 0 THEN BEGIN
  RETURN, !NULL
ENDIF
```

```

; Make this call recursively.
result = contents

FOR j=0,childCount-1 DO BEGIN
    thisResult = cgGetObjects(contents[j], COUNT=count, ISA=isa)
    IF count GT 0 THEN result = [result, thisResult]
ENDFOR

IF N_Elements(isa) NE 0 THEN BEGIN
    indices = Where(Obj_ISA(result, isa), count)
    IF count GT 0 THEN result = result[indices] ELSE result = !Null
ENDIF

count = N_Elements(result)
RETURN, result

END
;-----

```

Then, I found I could do this without knowing the name of anything.

```

win = window()
p1 = plot(cgdemodata(17), color='red', /current)
p2 = plot(cgdemodata(17), color='green', /overplot, /current)
objs = cgGetObjects(win, ISA='IDLGRPLOT')

```

Oddly, there are four plot objects in the window, not two. Maybe the other two are used for backing store? Not sure about that. Maybe Mark can help us understand this. But, in any case, there appear to be duplicates. Oddly, I can't do this:

```

objs[0].color = 'blue'
objs[2].color = 'orange'

```

But, I can do this:

```

objs[0] -> SetProperty, Color=cgColor('navy', /Triple, /Row)
objs[2] -> SetProperty, Color=cgColor('orange', /Triple, /Row)
win.refresh

```

For what it is worth. :-)

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>  
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

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